



AVOX Systems

SERVICE INFORMATION LETTER

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OXYGEN - ATA CHAPTER 35

VENDOR CODE: 53655

TEST DATA SHEET FOR P/N 22504-07, 22504-09, 22504-11 and 22504-13 Pneumatic Flow Control Unit

1. BACKGROUND

- A. Overhaul Manual 35-20-118B specifies the tests that must be passed in order to return a unit to service. This SIL provides a standardized form on which to record the results of the required functional tests. This form will be incorporated into the Overhaul Manual at the next revision.
- B. You are authorized to copy the form on pages 2 and 3. If you copy the form on pages 2 and 3, you must copy all of the form.
- C. Use this form only for the AVOX Systems component printed on the form. Do not use this form for any other AVOX Systems components or for any components of another company.

2. EFFECTIVITY

- A. Aircraft
The Test Data Sheets on pages 2 and 3 can be used for all units whether removed from any aircraft or from spares inventory.
- B. This SIL applies to Pneumatic Flow Control Unit P/N 22504-07, 22504-09, 22504-11 and 22504-13 only.

3. MATERIALS

The only material required by this SIL is the Test Data Sheets on pages 2 and 3.

4. ACCOMPLISHMENT OF SIL

- A. Make complete copies of the Test Data Sheets on pages 2 and 3.
- B. Use a copy of the Test Data Sheets from pages 2 and 3 to record the results of tests whenever a P/N 22504-07, 22504-09, 22504-11 or 22504-13 Pneumatic Flow Control Unit is tested.

5. TO CONTACT AVOX SYSTEMS:

Use the contact information below to get a copy of an Overhaul Manual or the revision status of a publication. Give the AVOX Systems part number and the aircraft model when you request an Overhaul Manual copy.

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**OVERHAUL MANUAL 35-20-118B****TEST DATA SHEET A****22504-07, 22504-09, 22504-11, 22504-13 Pneumatic Flow Control Unit**

Tested by: _____

Date: _____

Part Number: 22504-_____

Inspected by: _____

Date: _____

Serial Number: _____

Refer to the Inspection/Check, Testing, and Trouble Shooting sections of OVERHAUL MANUAL 35-20-118B.**4. Inspection/Check**

Refer to the Inspection/Check section and inspect the assembly and components for evidence of external damage, scoring, thread damage, and overall condition. Verify no evidence of deterioration to elastomer components. Verify any parts that are no longer serviceable have been replaced.

☐ FAIL	☐ PASS
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8.A. Assembled Control Unit Test Procedures**Dielectric Strength Test**

Dielectric Strength
☐ FAIL ☐ PASS

8.B. Assembled Control Unit Test Procedures**(1) External Leakage Test**

Perform an external leakage test.

Inlet Pressure (psig)	Outlet Pressure (psig)	20 cc/min Allowed MAX
2000	65	☐ FAIL ☐ PASS

8.B. Assembled Control Unit Test Procedures**(2) Internal Leakage Test**

Perform an internal leakage test.

Inlet Pressure (psig)	10 cc/min Allowed MAX
2000	☐ FAIL ☐ PASS

8.B. First Stage Relief Valve Tests

(3) Perform an first stage relief valve test.

First Stage Port Pressure (psig)	Relief Valve Vents	First Stage Port Pressure (psig)	Relief Valve Flow 10 cc/min. MAX
140 ± 10	☐ FAIL ☐ PASS	120	☐ FAIL ☐ PASS

8.B. Outlet Relief Valve Tests

(4) Perform outlet relief valve tests.

Outlet Port Pressure (psig)	Relief Valve Cracks	Outlet Port Pressure (psig)	Relief Valve Flows Freely	Outlet Port Pressure (psig)	Relief Valve flow 10 cc/min. MAX
120 ± 10	☐ FAIL ☐ PASS	135	☐ FAIL ☐ PASS	80	☐ FAIL ☐ PASS

8.B. Assembled Control Unit Test Procedures**(3),(4) Automatic Actuation, Surge, and Manual Reset Test**

Perform actuation, surge, and manual reset tests.

Inlet Pressure (psig)	Configuration	Automatic Actuation Altitude (Feet)	Manual Reset @ 12,000 Feet	Electrical Actuation @ 10,000 Feet	Electrical Actuation @ Ambient	Surge to 50 psig 4 Seconds MAX
2,000	-07, -09, -13	13,250 - 14,500	☐ FAIL ☐ PASS	☐ FAIL ☐ PASS	☐ FAIL ☐ PASS	N/A
1,000	-07, -09, -13	13,250 - 14,500	☐ FAIL ☐ PASS	☐ FAIL ☐ PASS	☐ FAIL ☐ PASS	☐ FAIL ☐ PASS
300	-07, -09, -13	13,250 - 14,500	☐ FAIL ☐ PASS	☐ FAIL ☐ PASS	☐ FAIL ☐ PASS	N/A
2,000	-11	14,000 - 15,000	☐ FAIL ☐ PASS	☐ FAIL ☐ PASS	☐ FAIL ☐ PASS	N/A
1,000	-11	14,000 - 15,000	☐ FAIL ☐ PASS	☐ FAIL ☐ PASS	☐ FAIL ☐ PASS	☐ FAIL ☐ PASS
300	-11	14,000 - 15,000	☐ FAIL ☐ PASS	☐ FAIL ☐ PASS	☐ FAIL ☐ PASS	N/A

NOTE: FLOWS ARE GIVEN FOR OXYGEN TEST GAS @ NTPD.
APPLY THE APPROPRIATE CORRECTION FACTOR IF ANOTHER MEDIUM IS USED.

**OVERHAUL MANUAL 35-20-118B****TEST DATA SHEET B****22504-07, 22504-09, 22504-11, 22504-13 Pneumatic Flow Control Unit**

Tested by: _____

Date: _____

Part Number: 22504-_____

Inspected by: _____

Date: _____

Serial Number: _____

8.B. Assembled Control Unit Test Procedures**(3),(5) Flow/Inlet Pressure Test**

Perform a flow and inlet pressure test for the 22504-07, 22504-09, and 22504-11 Flow Control Unit.

Inlet Pressure (psig)	Altitude (Feet)	Outlet Flow (lpm)		Allowable Outlet Pressure (psig)	
		Low	High		
2,000	14,000	10	230	2.25 - 5.4	☐ FAIL ☐ PASS ☐
2,000	40,000	10	1000	50.0 - 54.0	☐ FAIL ☐ PASS ☐
2,000	30,000	10	770	34.3 - 37.5	☐ FAIL ☐ PASS ☐
2,000	20,000	10	430	10.8 - 13.8	☐ FAIL ☐ PASS ☐
600	30,000	10	770	34.3 - 37.5	☐ FAIL ☐ PASS ☐
600	20,000	10	430	10.8 - 13.8	☐ FAIL ☐ PASS ☐

8.B. Assembled Control Unit Test Procedures**(3),(5) Flow/Inlet Pressure Test**

Perform a flow and inlet pressure test for the 22504-13 Flow Control Unit.

Inlet Pressure (psig)	Altitude (Feet)	Outlet Flow (lpm)		Allowable Outlet Pressure (psig)	
		Low	High		
2,000	14,000	10	230	5.0 - 8.2	☐ FAIL ☐ PASS ☐
2,000	40,000	10	1000	5.0 - 8.2	☐ FAIL ☐ PASS ☐
2,000	30,000	10	770	37.0 - 40.3	☐ FAIL ☐ PASS ☐
2,000	20,000	10	430	13.5 - 16.6	☐ FAIL ☐ PASS ☐
600	30,000	10	770	37.0 - 40.3	☐ FAIL ☐ PASS ☐
600	20,000	10	430	13.5 - 16.6	☐ FAIL ☐ PASS ☐

6. Assembly Procedure**AZ. Pressure Transducer Test**

Perform a pressure transducer test on the 22504-07 and 22504-11 Flow Control Units only.

Inlet Pressure (psig)	Allowable Voltage Limits (VDC)	
500	1.036 - 1.204	☐ FAIL ☐ PASS ☐
1,000	2.156 - 2.324	☐ FAIL ☐ PASS ☐
1,500	3.276 - 3.444	☐ FAIL ☐ PASS ☐
2,000	4.396 - 4.564	☐ FAIL ☐ PASS ☐

6. Assembly Procedure**C. Cover Subassembly Leak Test**

Perform a cover leak test.

Inlet Pressure (psig)	No Evident Leakage (Bubbles in the leak test solution indicate leakage)
15 minimum	☐ FAIL ☐ PASS ☐

NOTE: FLOWS ARE GIVEN FOR OXYGEN TEST GAS @ NTPD.

APPLY THE APPROPRIATE CORRECTION FACTOR IF ANOTHER MEDIUM IS USED.